



# **Procedures for Temporary Capacity Restriction Management**

Complementary document (handbook) to Description of the Timetabling and  
Capacity Redesign Process

## **Version 3.0**

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## Version history

VERSION	RESPONSIBLE	DATE	CHANGES
0.1	Á. Kertai P. Koiser S. Čarek Zs. Ungvári Cs. Bognár-Nyerges A. Di Paola D. Haltner Zs. Ungvári	2021-08-27	<u>Creation of the document based on the:</u> ➤ TCR Guidelines v3.0 ➤ TTR relevant descriptions/guidelines ➤ Task Force Meetings, ➤ Bilateral discussions with IMs,
0.2.	Ádám Kertai Head of Capacity Process Management	2021-09-17	<u>Inclusion of remarks provided by</u> ➤ TCR WG, ➤ TCR Q &A sessions
0.3.	Ádám Kertai Head of Capacity Process Management	2021-09-29	➤ <u>Inclusion of remarks provided by Banedanmark</u> ➤ Bane NOR ➤ DB Netz ➤ FTE ➤ ÖBB InfraProRail ➤ RCA ➤ SNCF Reseau ➤ <u>Trafikverket</u>
0.4.	Ádám Kertai Head of Capacity Process Management	2021-10-20	<u>Inclusion of remarks provided by:</u> ➤ DB Netz ➤ Infrabel ➤ Legal Working Group ➤ Sales and Timetabling Working Group
0.5.	Ádám Kertai Head of Capacity Process Management	2021-10-27	<u>Inclusion of remarks provided by:</u> ➤ Legal Working Group ➤ <u>TTR Process Group</u>
1.0	RNE General Assembly	2021-12-07	Approval of the version 0.5 by the RNE General Assembly on 7 December 2021
1.1	Ádám Pintér Capacity Supply & TCR Manager	2022-09-01	<u>Inclusion of remarks provided by:</u> ➤ TTR-PG and TCR WG on 21 June 2022
2.0	RNE General Assembly	2022-12-06	Approval of the version 1.1 by the RNE General Assembly on 6 December 2022
2.1	TCR Working Group	2024-09-11	Adjustment of the version 2.0 for TT2027. Removed duplicated TTR content; added references to original handbooks.
3.0	RNE General Assembly	2024-12-10	Approval of the version 3.0 by the RNE General Assembly on 10 December 2024

## Disclaimer, application and transition period

*This document is intended as a handbook for the implementation of the handling of the TCRs (temporary capacity restrictions) as described in the TTR Process by RNE. As neither legislation nor IT-systems are currently fully adapted to enable all the elements of TTR, individual TTR elements can only be implemented by the infrastructure managers to a limited extent for the upcoming timetable periods, starting in December 2024. If and when the legislation and IT-systems fully enable the implementation of all the elements of TTR, the different RNE handbooks on those elements should be applied to the process. Regarding TCRs, Annex VII to Directive 2012/34 is directly applicable in all Member States of the European Union. The exact details for the transitional period are elaborated in the Basic Requirements.*

Infrastructure Managers and Allocation Bodies should adapt their internal processes and the Network Statement in line with the Procedures for Temporary Capacity Restriction from X-60<sup>1</sup>, where X denotes the first timetable referring to the complete roll out of TTR.

The Basic Requirements will contain the description of the geographical scope, which might be defined differently for the first years of implementation. The Basic Requirements are subject of RNE GA.

The Handbook contains elements referring to the period after X-18, these parts of the Handbook are subject of adjustments according to the future process development (e.g. Capacity Supply Handbook).

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<sup>1</sup> Please note that the current version of the Handbook does not describe (yet) the final TTR target picture

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## 1. Introduction and scope of this document

The IMs apply different approaches regarding the planning and coordination of TCRs. This is mainly due to different construction and maintenance planning processes, which depend on the budget and financial planning. Furthermore, the national legislation may contain different rules in connection with the applied timeframes, periods, and communication with the applicants.

To ensure, that the applicants can provide reliable and competitive railway transportation services to the end customers, the negative effects of TCRs on commercial capacity must be considered and controlled. This is reached by a capacity to carry out works that take into account commercial effects, such as maintenance issues (cost, maintenance performance, safety), and by finding acceptable commercial alternatives between IM and RU during TCR periods.

Therefore, the following goals must be achieved:

- Highest possible availability of infrastructure options to connect origins to destinations.
- Shortest possible transport time to account for customers' needs and reduce production costs
- Reliable timetables: maintaining competitive business characteristics while minimising the negative effect of TCRs on the timetable.

The European Union recognised the need for common rules to enhance the competitiveness of the railways, thus, the revised Annex VII (recast in 2017) of the Directive 2012/34/EU obliges the IMs to involve known and potential applicants, main operators of service facilities, terminals and other IMs affected by a TCR already at an early stage.

The harmonised implementation of the legislation is also a clear business demand; therefore, the elaboration of the currently applicable "Guidelines for Coordination / Publication of Planned Temporary Capacity Restrictions for the European Railway Network" version 3.0 (known as TCR Guidelines) became essential. The document "Procedures for Temporary Capacity Restriction Management" (hereafter TCR Handbook) defines how to handle each step of the TCR management process both to ensure smooth and reliable TCR planning, coordination and publishing according to the deadlines set in Annex VII of the Directive 2012/34/EU.

The Handbook has been designed also to cover RFC processes and thus replace all previous RNE/RFC guidelines covering this subject, such as "Guidelines for Coordination / Publication of Planned Temporary Capacity Restrictions for the European Railway Network" version 3.0.

IMs, who are RNE members, have committed to follow this Handbook and these procedures according to the "Disclaimer, application and transition period and by this promote internationally harmonised capacity management processes over the single European railway area.

## 2. Added value of the Handbook

- Enhances the unified implementation of the provisions set in Annex VII of the Directive 2012/34/EU,
- Creates a clear overview on the steps to be followed during the lifecycles of TCRs,
- Facilitates the TCR Coordination process with the commonly agreed principles and methods to be used,
- Contributes to the unified clustering of TCRs,
- Contributes to the unified impact calculation of TCRs,

- Provides an overview on the relation between the TCRs and the different TTR-components,
- Contributes to the unified handling of Late TCRs,
- Provides a unified method to evaluate the planned and real TCR consumption.

### 3. Reference documents

#### Legal requirements:

- **Directive 2012/34/EU** establishing a single European railway area
- **Commission Delegated Decision (EU) 2017/2075** replacing Annex VII to Directive 2012/34/EU
- **Regulation (EU) No 913/2010** concerning a European network for competitive freight
- **Commission Implementing Regulation (EU) 2017/2177** of 22 November 2017 on access to service facilities and rail-related services

#### Further requirements:<sup>2</sup>

- Process Description of the 'Timetabling and Capacity Redesign Process'
- Procedures for Alteration of Allocated International Paths
- Procedures for Capacity Strategy
- Procedures for Capacity Model
- Procedures for Capacity Supply
- Procedures for Feasibility Study

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<sup>2</sup> Source of documents: <http://rne.eu/downloads>

## 4. Glossary

Glossary/abbreviation	Definition
Ad hoc	Traffic for which the published capacity for Annual Timetable and Rolling Planning cannot be used (from X-2) or traffic requested in very short notice (short-term Ad hoc requested after M-1 for all remaining capacity).
Applicant	A railway undertaking (RU) or an international grouping of railway undertakings or other persons or legal entities, such as competent authorities under Regulation (EC) No 1370/2007 and shippers, freight forwarders, and combined transport operators, with a public service or commercial interest in procuring infrastructure capacity <sup>3</sup> . Applicants can be divided into two groups: <ul style="list-style-type: none"> <li>• 'RU applicant': RU or international grouping of RUs</li> <li>• 'Non-RU applicant': other persons or legal entities with a public service or commercial interest in procuring infrastructure capacity.</li> </ul>
Capacity Model	A Capacity Model is definition in the TTR environment with the aim to visualise: <ul style="list-style-type: none"> <li>• Volumes of capacity for commercial traffic</li> <li>• Volumes of capacity to be used for TCR</li> </ul>
Capacity Strategy (X-60 – X-36)	IMs start the advance planning with the creation of Capacity Strategies. The focus of the strategy is on the future infrastructure development and the planning principles, already here international coordination is needed, as various planning approaches exist between IMs. The Capacity Strategy is also the main connection between the political and social requirements of citizens and the capacity planning process. The validated final strategies set the rules for the Capacity Models and next planning steps.
Consecutive days	The sequence of calendar days on which TCRs apply on each day, on the same section without any interruption. If possible, repetitive patterns should be taken into account concerning the definition of consecutive days (e.g., If a TCR occurs on every Saturday and Sunday in a month, the TCR should be coordinated with the neighbouring IMs not as 4 different TCRs, but as 1 TCR taking place on 4 weekends.)
Consultation	A process for formal communication between the IM and Applicants about TCRs. This includes: <ul style="list-style-type: none"> <li>• Public meetings for stakeholders</li> <li>• Written information with options for feedback</li> </ul> The IM proactively informs Applicants about TCRs and seeks their opinions before publication. The IMs take the received feedback into account as much as possible when finalising the relevant TCR.

<sup>3</sup>Article 3 paragraph 19 of directive 2012/34/EU

Coordination	<p>IMs collaborate to plan TCRs effectively, ensuring safe railway operations and meeting market needs. Coordination efforts aim to:</p> <ul style="list-style-type: none"> <li>• Finding the best solutions for capacity restrictions</li> <li>• Rationalising and minimising the impact and duration of capacity restrictions</li> <li>• Optimising the scheduling of TCRs among IMs to reduce the impact on the market</li> </ul>
Diversions line(s)	Railway line(s) which are crucial to ensure continuity of traffic in the event of any capacity restriction (e.g. TCR, disruption) on a certain line.
ECMT	<p>European Capacity Management Tool (ECMT) The ECMT provides the European-level IT-backbone of the Capacity Model and Capacity Supply.</p>
IM	Infrastructure Manager (or Allocation Body) who is responsible for the TCR.
Impact on other networks	A TCR that has an impact on timetables of other IMs' during the restricted period.
Known TCRs	TCRs not matching with the definition of Late TCRs
Late TCRs	All TCRs that are defined after the last publication deadlines (defined by Commission Delegated Decision (EU) 2017/2075 (Annex VII))
M - # days	A deadline referring to the first day of a train operation (M) and the number of days (#) in advance of this deadline.
TCR Windows	Regular capacity is blocked in advance during which preventive maintenance and constructions are expected to be executed. The TCR windows can also serve as a cushion against fluctuations in available capacity for train runs and TCRs.
Network Statement	The statement, which sets out in detail the general rules, deadlines, procedures, and criteria for charging and capacity allocation schemes, including such other information as is required to enable applications for infrastructure capacity.
Path Alteration	In case the initially allocated path is not usable anymore, IMs may apply the path alteration process.
Representative day	A representative day is a non-TCR day, applied under regular circumstances, used as a basis for calculating the impact on traffic during TCRs.
Regulatory Body	The Regulatory body in each country performs the tasks as described in article 56 of 2012/34/EU.
Rerouting	A rerouting option is an alternative route that may be taken in a situation of disruption to reach the same destination. Diversions lines are considered for rerouting.
RFC	<p>Rail Freight Corridor A corridor is organised and set up in accordance with the Rail Freight Regulation (RFR) 913/2010/EU. A 'List of initial freight corridors' is provided in the Annex of the RFR.</p>



Service facilities	installation, including ground area, building, and equipment, which has been specially arranged, as a whole or in part, to allow the supply of one or more services referred to in points 2 to 4 of Annex II of Directive 2012/34.
Significantly modified TCRs	For details, see: Annex B: Significantly modified TCRs.
T – (n)	A deadline referring to the day of the start of TCRs (T) and the number of months (n) in advance of this deadline.
TCR	Temporary Capacity Restrictions This term covers the earlier used ‘works’, ‘possessions’, ‘works and possessions’, and ‘capacity restrictions. It indicates that the restrictions are planned (no force majeure restrictions) and temporary (everlasting bottlenecks).
Terminal	installation arranged to allow either the loading and/or the unloading of goods onto/from freight trains, and the integration of rail freight services with the road, maritime, river, and air services, and either the forming or modification of the composition of freight trains; and, where necessary, performing border procedures at borders with European third countries’ (Article 2 2. (b) of RFR 913/2010/EU).
TT	Timetable
TTR	Timetabling and Capacity Redesign for Smart Capacity Management A joint project of RNE and FTE to modify the TT planning process according to future requirements.
X-n	A deadline referring to the month of the annual timetable change (X) and the number of months (n) in advance of this deadline.
TCR Tool	an application that shows mutual information on a common platform, with common terminology and visualization of TCRs. The further aim is to use the tool for coordination, and publication of TCRs of all IMs.
ECMT	European Capacity Management Tool (also known as TTR Capacity Hub), which is used for visualisation <sup>4</sup> of capacity (traffic and TCRs) of all IMs for Capacity Model and Capacity Supply.

<sup>4</sup> Please note that the exact visualisation of overviews can differ from the figures which are shown in this Handbook.

## 5. Classification of TCRs

### 5.1. Criteria for capacity restrictions to be coordinated and published

Capacity restrictions may vary widely as regards their duration and impact on rail traffic. Therefore, publication criteria must be defined for TCRs, depending on their effects on capacity and rail traffic. The documents provide a framework of criteria and thresholds to be used as a reference for the publication of TCRs. To provide a method how each TCR should be handled, an impact classification has been created based on Annex VII of recast Directive 2012/34/EU (both criteria must be fulfilled):

	<b>Consecutive days</b>	<b>Impact on traffic (estimated traffic cancelled, rerouted, or replaced by other modes of transport)</b>	<b>First publication deadline according to Annex VII</b>
<b>Major impact TCR<sup>1</sup></b>	More than 30 consecutive days	More than 50% of the estimated traffic volume on a railway line per day	X-24
<b>High impact TCR<sup>1</sup></b>	More than 7 consecutive days	More than 30% of the estimated traffic volume on a railway line per day	
<b>Medium impact TCR<sup>1</sup></b>	7 consecutive days or less	More than 50% of the estimated traffic volume on a railway line per day	X-12
<b>Minor impact TCR<sup>2</sup></b>	unspecified <sup>3</sup>	More than 10% of the estimated traffic volume on a railway line per day	X-4
<b>Less than minor impact TCR</b>	unspecified	Maximum of 10% of the estimated traffic volume on a railway line per day	The IMs are recommended to comply with the Path Alteration requirements <sup>4</sup> : <ul style="list-style-type: none"> <li>➤ Passenger: T-4</li> <li>➤ Freight: T-1</li> </ul>

1) Annex VII of Directive 2012/34/EU, article (11);

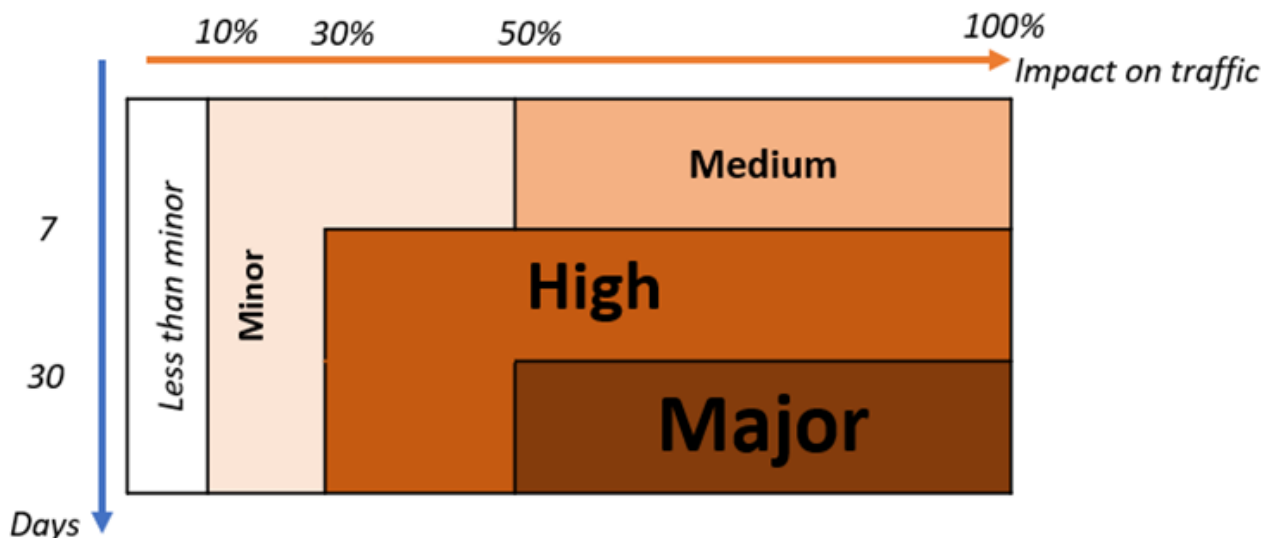
2) Annex VII of Directive 2012/34/EU, article (12).

3) According to Annex VII of Directive 2012/34/EU, article (12) "7 consecutive days or less", modified here.

4) Data Coming from the RNE Path Alteration Handbook. Less than minor TCRs are not regulated by Annex VII.

The IMs may set additional classification of the TCRs for their national processes, however, for the international publication, coordination, and consultation, the classification according to the mentioned criteria must be met. Nevertheless, it is possible both for the national and international processes to classify TCRs in a stricter way than it is described in present Handbook. To achieve a European-wide harmonised classification method, the IMs should not consider possible delays (e.g. by temporary speed restrictions) as part of the TCR impact calculation. All TCRs which could not be classified according to the original criteria of Annex VII (Major, High, Medium, and Minor TCRs) of Directive 2012/34/EU should be categorised as Less than minor impact TCRs.

For instance, in case a TCR requires the cancellation of 5% of the paths (e.g., last and first passenger train), the IMs are highly recommended to consider this TCR as a Less than minor impact TCRs, and the possible mitigation measures can be applied according to the Path Alteration Process, which means that the infrastructure manager provides details on the offered train paths for passenger trains no later than four months and for freight trains no later than one month before the beginning of the capacity restriction unless the Infrastructure Manager and the concerned applicants agree on a shorter lead time. Of course, the IMs are recommended to consult these TCRs with the Applicants before the deadlines defined for the Path Alteration Process.



## 5.2. Estimation method for 'Impact on traffic'

Since the impact of TCRs is calculated significantly earlier than a complete timetable for a given period becomes available

The baseline for the estimation is:

Date when the first information has become available concerning a TCR	Estimation base
X-60-X-21	Draft Capacity Model from the previous (or for the concerned if any exists) TT period including all known changes in the traffic
X-21-X-18	Draft Capacity Model for the concerned TT period
X-18-X-12	Published Capacity Model for the concerned TT period

It is important to keep the calculation simple. Therefore, in the calculation, only the relevant line section of the respective TCR is taken into consideration without the secondary effects from TCRs on other line sections. The calculation should be supported by an IT tool.

On the chosen day, all paths or traffic volumes within the geographic range of the TCR (within one line section) together will serve as a baseline ('Number of volumes/paths on a representative day'). By default, the representative day is a non-TCR working day. Further examples are presented in [Annex A: TCR Impact Estimation use cases](#).

A day when a TCR is in place should be compared with a representative day. A basic timetable/capacity model must be created and the paths/volumes which are not available due to capacity restrictions must be indicated/counted ('Number of affected paths/volumes in TCR calculation').

$$[\text{TCR impact on traffic in \%}] = \left( \frac{[\text{Number of affected volumes/paths in TCR calculation}]}{[\text{Number of volumes/paths on a representative day}]} \cdot 100 \right) (1)^5$$

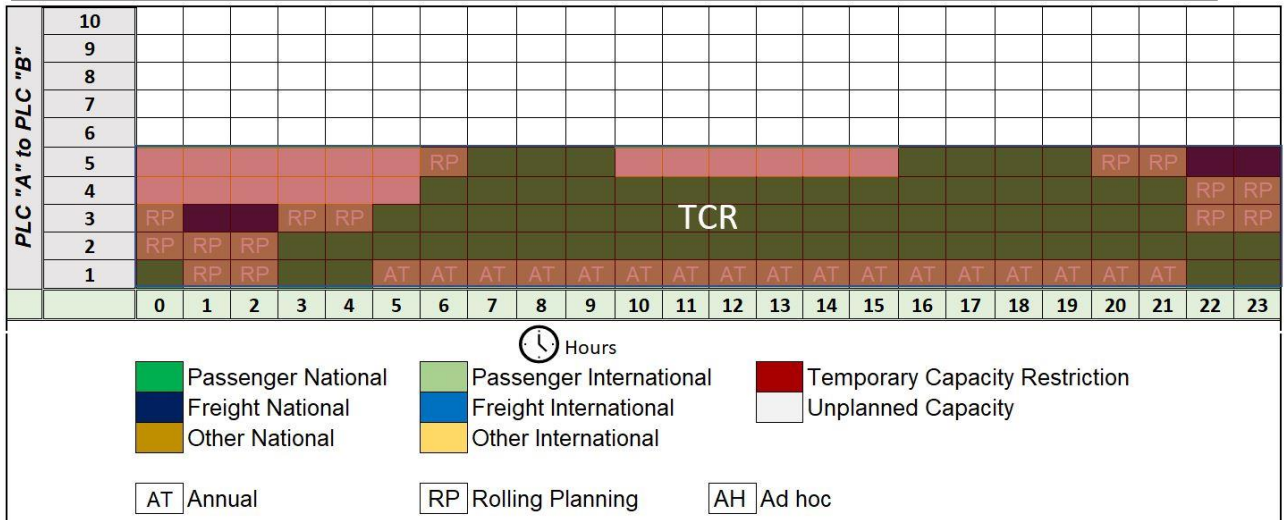
### Use cases:

The numerator in formula (1) is<sup>6</sup>:

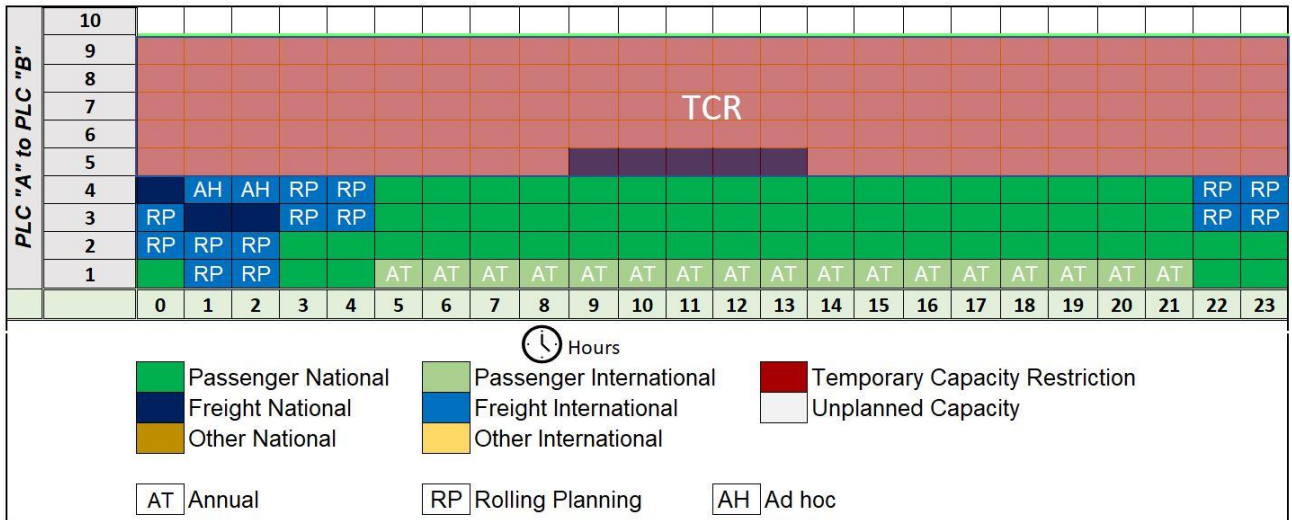
- exactly the number of volumes/paths on a representative day in case of total closure (In the figure below, 102 is affected and 102 was planned),

<sup>5</sup> Please note that the formula does not apply for the impact calculation method defined in Annex A: TCR Impact Estimation use cases as use case 6.

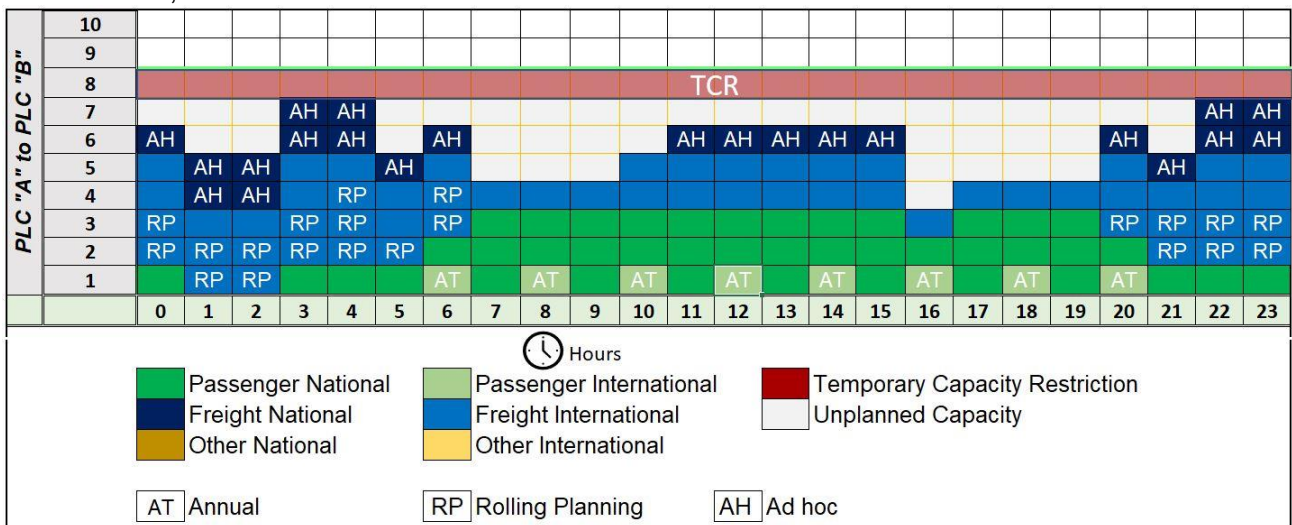
<sup>6</sup> Should be calculated by an IT solution.



➤ the number of volumes overlapped by the TCR and traffic part. In the presented example, the partial closure occupies 50 % of the capacity, however only 5 volumes are affected. In that case, the calculation is 5/101.



➤ zero, if a certain TCR does not affect the traffic.



➤ zero, even if half of the capacity is not available, because the TCR does not affect the traffic.

		TCR																									
																										Hours	
PLC "A" to PLC "B"	10																										
	9																										
	8																										
	7																										
	6																										
	5									AT	AT										AT	AT					
	4		AH	AH					AT	AT	AT	AT	AT	RP	RP	RP	RP	RP	AT	AT	AT	AT	AT	RP	RP		
	3				AH	AH	AH	AT						AT	AT	AT	AT	AT					AT	AT			
	2		RP	RP					AT	AT	AT	AT								AT	AT	AT	AT			RP	RP
	1		RP	RP	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		

**Passenger National** (green), **Freight National** (dark blue), **Other National** (brown), **Passenger International** (light green), **Freight International** (blue), **Other International** (yellow), **Temporary Capacity Restriction** (red), **Unplanned Capacity** (white)

**AT** Annual, **RP** Rolling Planning, **AH** Ad hoc

When importing the TCR information from the national system to the TCR Tool (regardless of if it is done manually or with interface), the IMs should define the capacity impact for every TCR. It should be possible for the IMs to indicate:

- if a TCR is a total closure (100% of the capacity is consumed),
- if a TCR is a partial closure (~75% of the capacity is consumed),
- and adjust the value freely (e.g. 5%, 10% etc).

More details concerning the impact calculation and special use cases can be found in **Annex A: TCR Impact Estimation use cases**.

The IMs may use their national system to calculate the impact of TCRs as long as the output of the calculation methodology is as precise as it is defined by the formula (1) in this Handbook.

		Number of volumes																													
																										Hours					
PLC "A" to PLC "B"	10																														
	9																														
	8																														
	7								AT	AT	AT	AT	AH	AH	AH	AH	AH			AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	
	6																							RP	RP	RP	RP	RP	RP	RP	RP
	5		AH	AH	AH	AH	AH	AT						RP	RP	RP	RP	RP									RP	RP	RP	RP	
	4		AH	AH	AH	AH	AT						AT	AT	AT	AT	AT									AT	AT				
	3																												RP	RP	
	2		RP	RP					AT	AT	AT	AT										AT	AT	AT	AT						
	1		RP	RP	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23						

**Passenger National** (green), **Freight National** (dark blue), **Other National** (brown), **Passenger International** (light green), **Freight International** (blue), **Other International** (yellow), **Temporary Capacity Restriction** (red), **Unplanned Capacity** (white)

**AT** Annual, **RP** Rolling Planning, **AH** Ad hoc

Number of volumes  
**164**



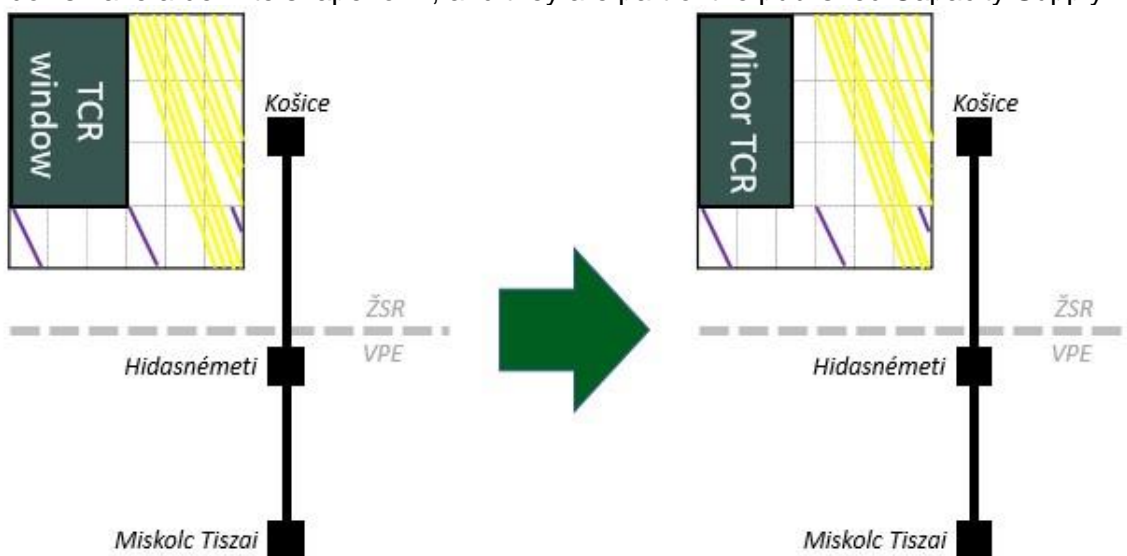
## 6. TCR windows

Regular infrastructure capacity is set aside in advance for expected preventive maintenance and construction activities. TCR windows can serve as a buffer to manage fluctuations in available capacity for train operations and TCRs.

Thorough TCR planning aims to eliminate changes in the Capacity Models/Capacity Supply and minimise the impact on allocated paths. Changes in TCRs that result in major replanning and large uncertainties for the applicants need to be reduced. Similarly, Late TCRs need to be reduced as much as possible and triggered only by external factors, which are out of any IMs' control.

However, the Capacity Supply is published already at X-11, which is too early for exact details for minor impact TCRs, not to mention Late TCRs. Therefore, the IMs can establish regular TCR windows to be able to react to many of these TCRs when they become known. The TCR windows shall be sufficiently extensive for the TCRs while being ambitious to allow for all foreseeable traffic volumes. Their size has to be decided by IMs based on their experience from the past and the life-cycle of the concerned infrastructure. For the cross-border lines, TCR windows must be coordinated according to Annex VII deadlines between the neighbouring IMs (and where applicable also other IMs that might be affected).

The aim of the coordination should be to minimise the impact on the traffic, to synchronise future TCRs on a given route, and avoid restricting capacity on diversionary routes. The TCR windows have a definite shape form, and they are part of the published Capacity Supply.



Naturally, the application of TCR windows does not eliminate the need for path alteration as not all minor and Late TCRs can be planned inside them. However, a sufficient number of TCR windows of proper duration can accommodate a substantial number of minor and late TCRs without an impact on allocated paths and without the need for coordination (as long as TCR windows were already made subject to coordination in the Capacity Supply phase).

In case an IM does not plan to make use of a particular TCR window or want to cancel an already planned TCR, it shall be released for ad hoc requests at the latest 14 calendar days before the operation day.

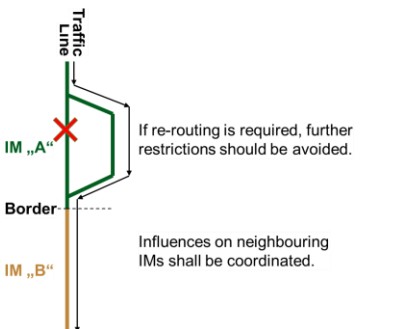
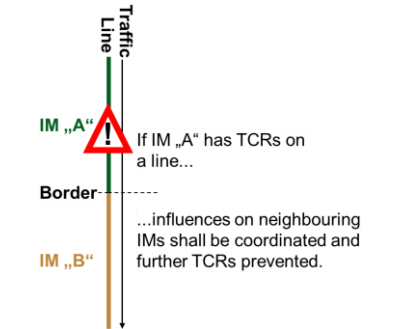
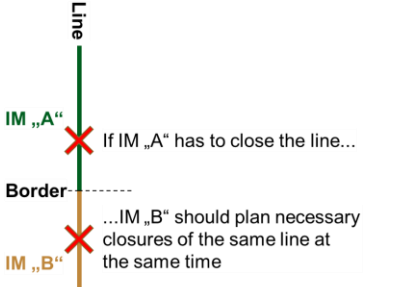
## 7. TCR management process

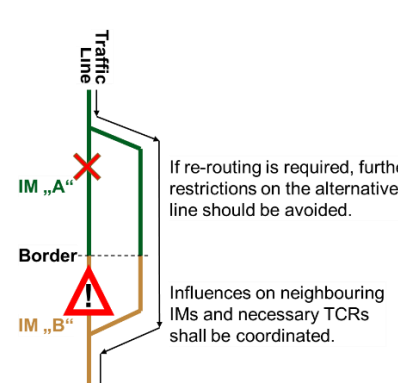
### 7.1. Aim of TCR coordination

Simply gathering and publishing information about capacity restrictions without any coordination has little value for IMs and Applicants. The coordination of TCRs shall ensure that planned capacity restrictions will consider the needs of both the IMs and the market by rationalising and minimising the gravity of impact and duration of the capacity restrictions.

The coordination phase aims to guarantee the possibility to all IMs to carry out their respective TCRs, optimising their mutual interferences, maximise their revenue, and minimising the impact on applicants. On the other hand, an active exchange process about TCR between the IM and Applicants is also essential, which is done during the consultation process.

The coordination and consultation process should be based on the following principles:

<p>1. TCRs of one IM which may influence traffic of other IMs should be coordinated between involved IMs.</p>	
<p>2. In the case of a TCR on one section of the network which does not allow reroutings, further restrictions in other sections of the network should be avoided, unless they do not affect the total capacity offer (also over a longer period) of the network in a negative way.</p>	
<p>3. In case of total closure, the aim should be to plan the maximum amount of works simultaneously (clustering of works) if technically possible and compatible with all kinds of traffic (passenger, freight, local trains).</p>	

<p>4. A TCR on one section of the network which requires rerouting of traffic shall be coordinated with capacity available over alternative routes and border crossings to limit the negative impact on the capacity offer of the IMs. This may be done for example by avoiding, or at least coordinating, TCRs on the alternative route. Train operation must be ensured.</p> <p>5. A TCR on one section of the network which requires rerouting of traffic shall be coordinated or combined with additional restrictions on a neighbouring IMs affected network if the same rerouting may be used. If possible, modifying the times of TCRs shall be taken into consideration. If possible, both IMs should work at the same time in the same operation mode.</p>	 <p>If re-routing is required, further restrictions on the alternative line should be avoided.</p> <p>Influences on neighbouring IMs and necessary TCRs shall be coordinated.</p>
<p>6. Special attention should be taken if:</p> <ol style="list-style-type: none"> <li>The TCR is on a border section.</li> <li>The TCR causes a diversion of trains through another border section.</li> <li>The TCR causes cancellation of international trains.</li> <li>The TCR is located on a diversionary line using a border point.</li> <li>The TCR causes delays above the thresholds agreed on by IMs among themselves on a voluntary basis..</li> </ol>	
<p>7. The second round of consultation is obligatory with the Applicants if changes were made after the first round (e.g. due to results of coordination).</p>	
<p>8. Both the consultation and coordination process shall be done in a transparent, non-discriminatory way. The applicant has the right to appeal to the regulatory body if it believes that it has been unfairly treated, discriminated against, or is in any other way aggrieved concerning the TCR management process.</p>	
<p>9. Therefore, it is in the best interest of all IMs to actively participate in the process and share information in due time.</p>	

## 7.2. Conflict resolution

*The conflict resolution part will be updated based on the outcome of the International Leading Entity project.*

## 7.3. Process steps for TCR management (Between X-60 and X-36)

IMs draft Capacity Strategies, including TCR planning principles, outlining rules for TCR window allocation and planning. IMs provide input during this phase, with a focus on general guidelines rather than specific volumes or timings. Major impact TCRs are pre-announced, with coordination between IMs occurring from X-54 to X-36 to align planning principles and address issues. Interested Applicants can offer feedback during this process.

In the next step (X-54 – X-36) the IMs should coordinate with the other involved IMs to find good compromises and best solutions to the identified issues, as the planning principles should be aligned. The IMs may start the initial coordination of crucial Major impact TCRs in this phase. Furthermore, the interested Applicants will also have the possibility to provide feedback to the drafts containing the TCR-planning principles.



Examples of TCR planning principles:

- TCRs should be clustered to minimise the gravity of impact and duration.
- On lines (A, B)<sup>7</sup> no TCRs shall be planned simultaneously.
- Due to insufficient re-routing capacity, no total closure shall be planned during peak hours.
- TCR windows on lines (A, B, C, D)<sup>7</sup> should be planned rather during weekends than working days.

IMs should publish in the Capacity Strategy a transparent overview of consultation principles (preliminary consultation and consultation of traffic solution) including deadlines, methods and platforms used for major and high impact TCRs by highlighting the following:

- How the consultation process will be conducted for each major and high impact TCR (including preliminary consultation process).
- How and until when the Applicants can ask for two alternatives concerning major impact TCRs.

The final and validated Capacity Strategies shall be published by the IMs at X-36.

#### **7.4. Process steps for TCR management (Between X-36 and X-18)**

Between X-36 and X-24, preliminary coordinations of the Major and High impact TCRs are held and shall be facilitated through bilateral (or multilateral) meetings of concerned IMs. Each IM should share the information with the other IMs in a transparent manner concerning all major and high-impact TCRs which are part of the lines defined in the Capacity Strategy, then each IM should indicate which other IMs might be affected by a certain TCR and any IM can identify itself as an affected stakeholder regarding other IMs' TCRs. IMs should respect other IMs' interests and invite them for the preliminary coordination. All IMs shall coordinate TCRs in such a way that their impact on capacity and Applicants is as low as possible and the use of infrastructure as efficient as possible (as described in chapter 5.1) The planning has to follow the principles agreed in the Capacity Strategy.

The IMs can invite for the preliminary coordination:

- those Applicants and other IMs who have indicated their interests regarding the line affected with the TCR,
- the main operators of service facilities, terminals,
- concerned RFCs.

The preliminary consultation for Major and High impact TCRs has to start at X-27 at the latest. In case the Applicants ask for Major impact TCR alternatives during the preliminary consultation, then at least two alternatives must be offered by IMs no later than X-25. If more than one IM is involved in this request (due to cross-border impact of the TCR), they should aim to provide a harmonised and commonly agreed response to the alternative. An alternative can offer e.g. a date adjustment and different solutions for the execution (e.g. partial closure instead of a total closure).

The IMs shall design the alternatives on the basis of the input provided by the applicants at the time of their requests jointly with them. The comparison shall include at least the details described in Annex VII for each alternative.

The IMs invite for the preliminary consultation:

- those Applicants who have indicated their interests regarding the line affected with the TCR (it should be possible for any Applicant to join the consultation process),
- the main operators of service facilities, terminals,
- concerned RFCs.

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<sup>7</sup> A generic example

By X-24, the status of Major and High impact TCRs should be published along with the data listed in Annex VII.

After the first publication, IMs should finalise the coordination of the Major impact TCRs among themselves at X-18 at the latest.

### **7.5. Process steps for TCR management (Between X-18 and X-8)**

Between X-18 and X-13.5 the IMs should coordinate the High and Medium impact TCRs among themselves. All IMs shall coordinate TCRs in such a way that their impact on capacity and Applicants is as low as possible and the use of infrastructure as efficient as possible (as described in chapter 5.1) Coordination shall be facilitated through bilateral (or multilateral) meetings of other concerned IMs. Each IM should indicate which other IMs might be affected by a certain TCR and any IM can identify itself as an affected stakeholder regarding other IMs' TCRs. IMs should respect other IMs' interests and invite them for the coordination.

The IMs can invite for the coordination:

- those Applicants and other IMs who have indicated their interests regarding the line affected with the TCR,
- the main operators of service facilities, terminals,
- concerned RFCs.

### **7.6. Process steps for TCR management (Between X-8 and X-3.5 )**

After the path request deadline for annual traffic, the IMs will start further elaboration on the path details. However, in the meantime, the need for minor TCRs can pop up, which sometimes makes it necessary to have further consultation/ between the Applicants and other concerned IMs. This consultation takes place in connection with the path elaboration process.

In case the TCR windows could accommodate the minor TCRs, no coordination and consultation are needed.

To trigger the consultation process, information concerning minor TCRs shall be made available to applicants and other concerned IMs at X-6.5 at the latest. Decisions made during consultations with the applicants should be in line to reduce IMs' costs and minimise the impact on applicants. The draft and final offer provided by the IMs should accommodate the impacts of the major, high, medium, and minor (to the extent as they are known) TCRs.

Even if the coordination of minor impact TCRs is not required by Annex VII, the IMs are highly recommended to coordinate the minor impact TCRs among themselves.

### **7.7. Process steps for TCR management (Between X-5.5 and X+12)**

In case the TCR windows could accommodate minor, less than minor or Late TCRs, no coordination and consultation are needed.

At X-4, the IMs should publish Minor TCRs:

- a) Planned days.
- b) Time of day, and, as soon as it can be set, the hour of the beginning and the end of the capacity restriction.
- c) Section of line affected by the restriction.
- d) The capacity of diversionary lines along with an overview of which type of service should be rerouted (if applicable).

Any alteration of an allocated path (due to late or less than minor TCRs) should follow the principles and deadlines defined in the Path Alteration Handbook.

### **7.8. Late TCRs**

To be defined.

### **7.9. Publication of TCRs**

The IMs shall publish the information in a transparent manner concerning the TCR management process defined in this document. The future goal is to use the TCR tool and ECMT at a European-wide level.

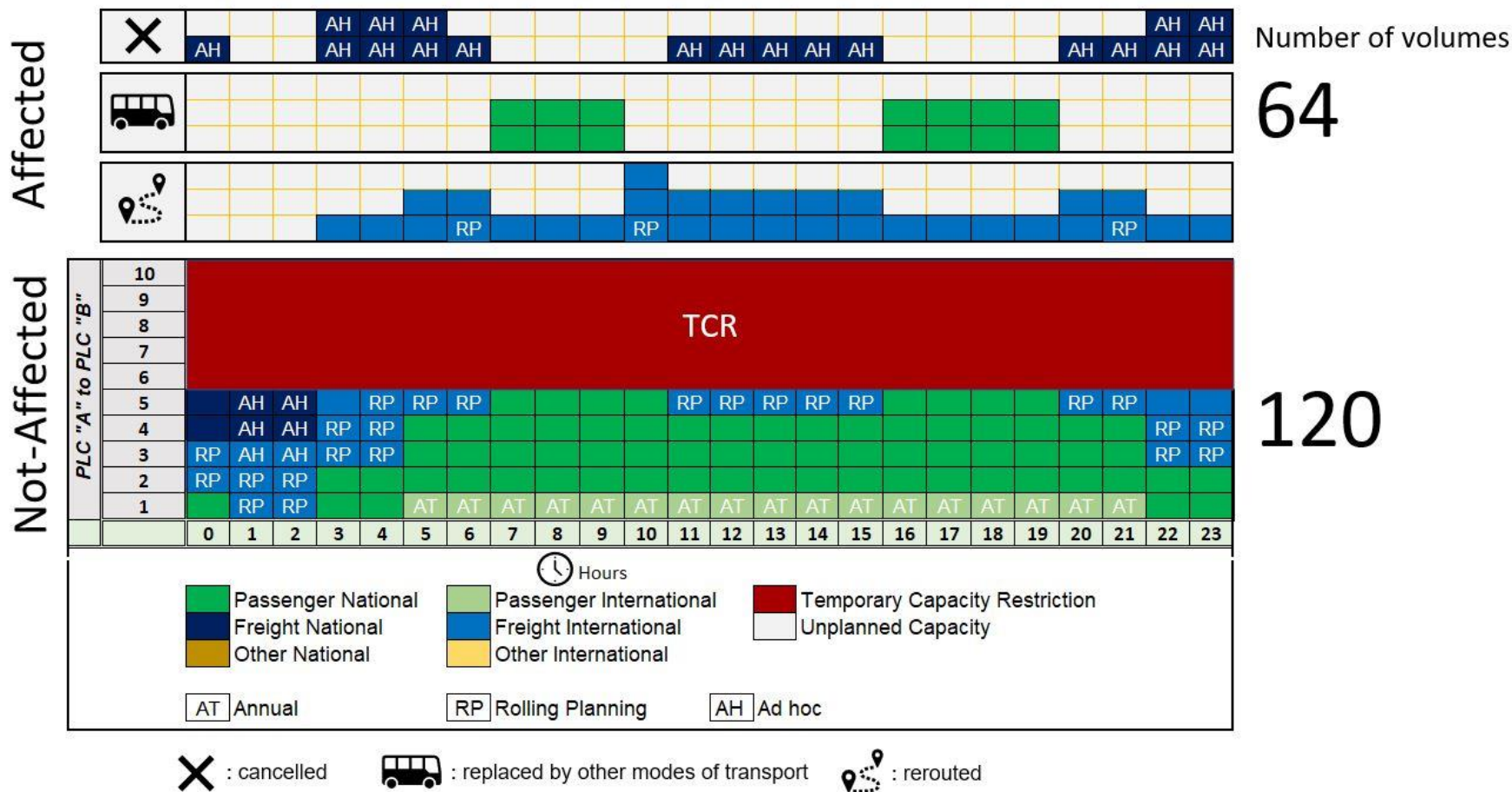
### **7.10. Exceptional process**

The IM may decide not to apply the periods laid down in points from 7.3 to 7.8 if the capacity restriction is necessary to re-establish safe train operations, the timing of the restrictions is beyond the control of the infrastructure manager, the application of those periods would be cost-ineffective or unnecessarily damaging in respect of asset life or condition, or if all concerned applicants agree. In those cases, and in case of any other capacity restrictions that are not subject to consultation following other provisions of Annex VII of Directive 2012/34/EU, the infrastructure manager shall consult the applicants and the main operators of service facilities concerned forthwith.

## Annex A: TCR Impact Estimation use cases

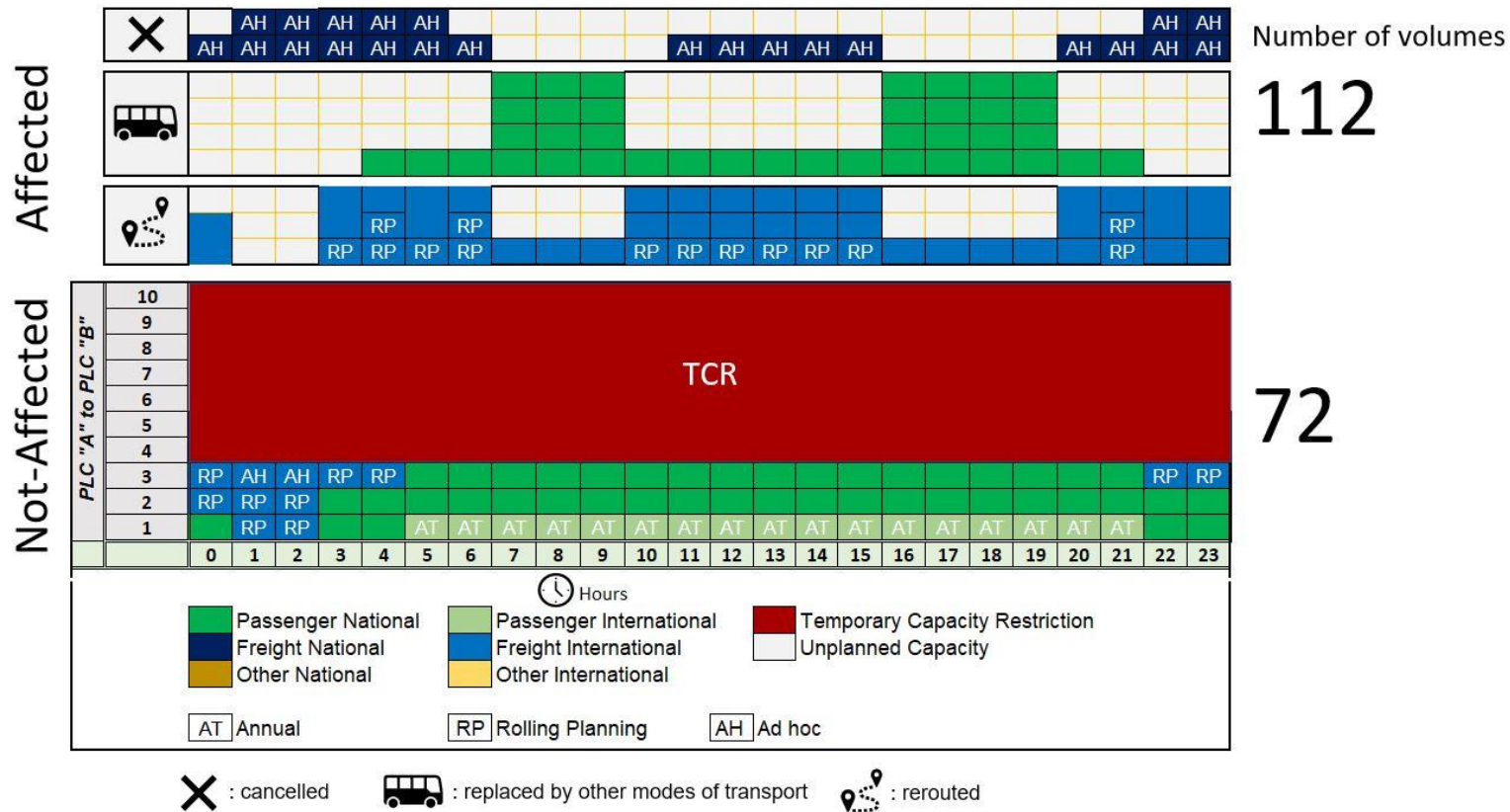
### Use case No 1: High impact TCR

Total number of paths: 184  
 Number of paths affected by the TCR: 64  
 Impact on the 35% of the paths  
 Duration: 25 days



## Use case No 2: Major impact TCR

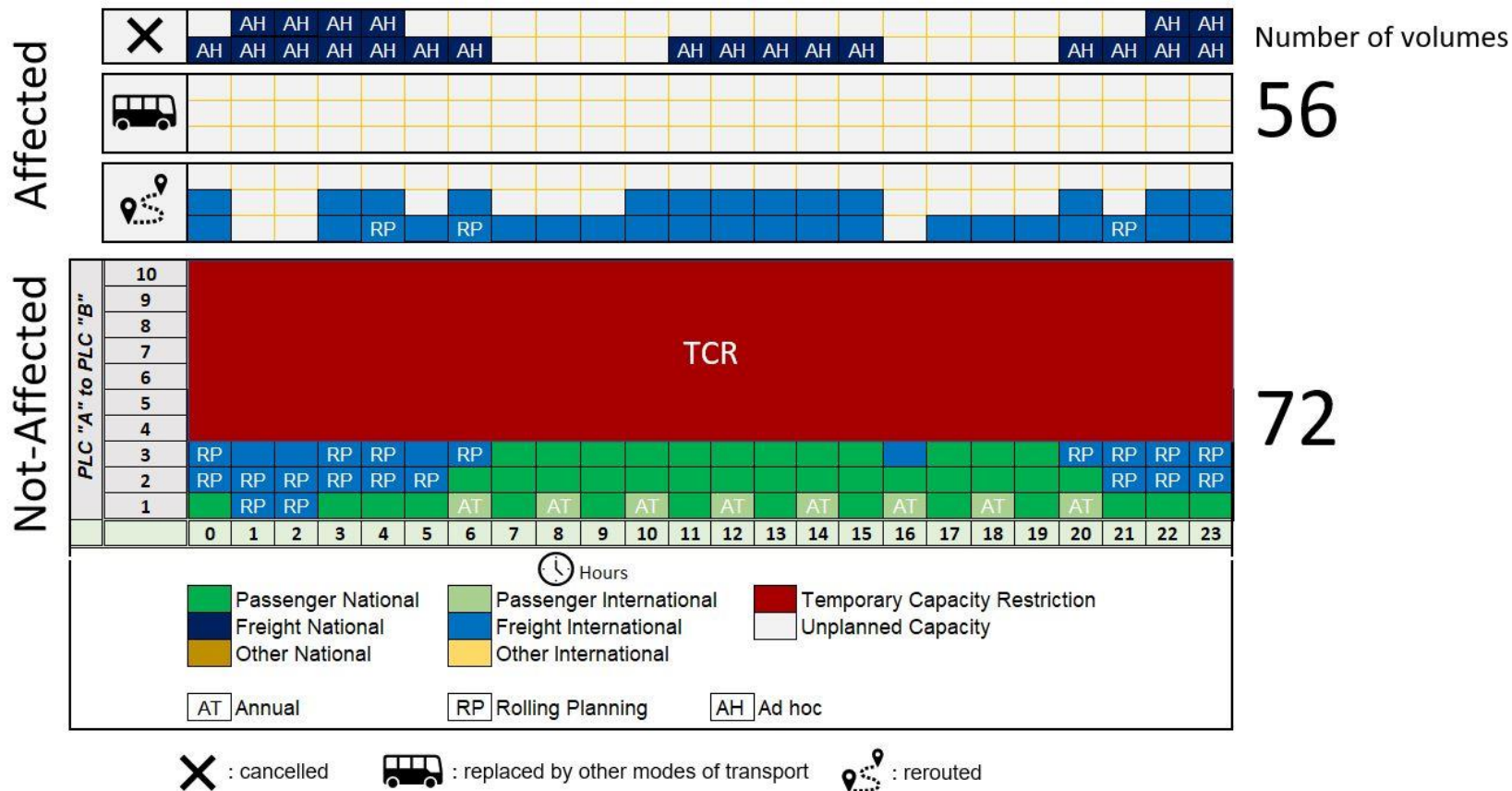
Total number of paths: 184  
 Number of paths affected by the TCR: 112  
 Impact on the 61% of the paths  
 Duration: 45 days  
 Major impact TCR





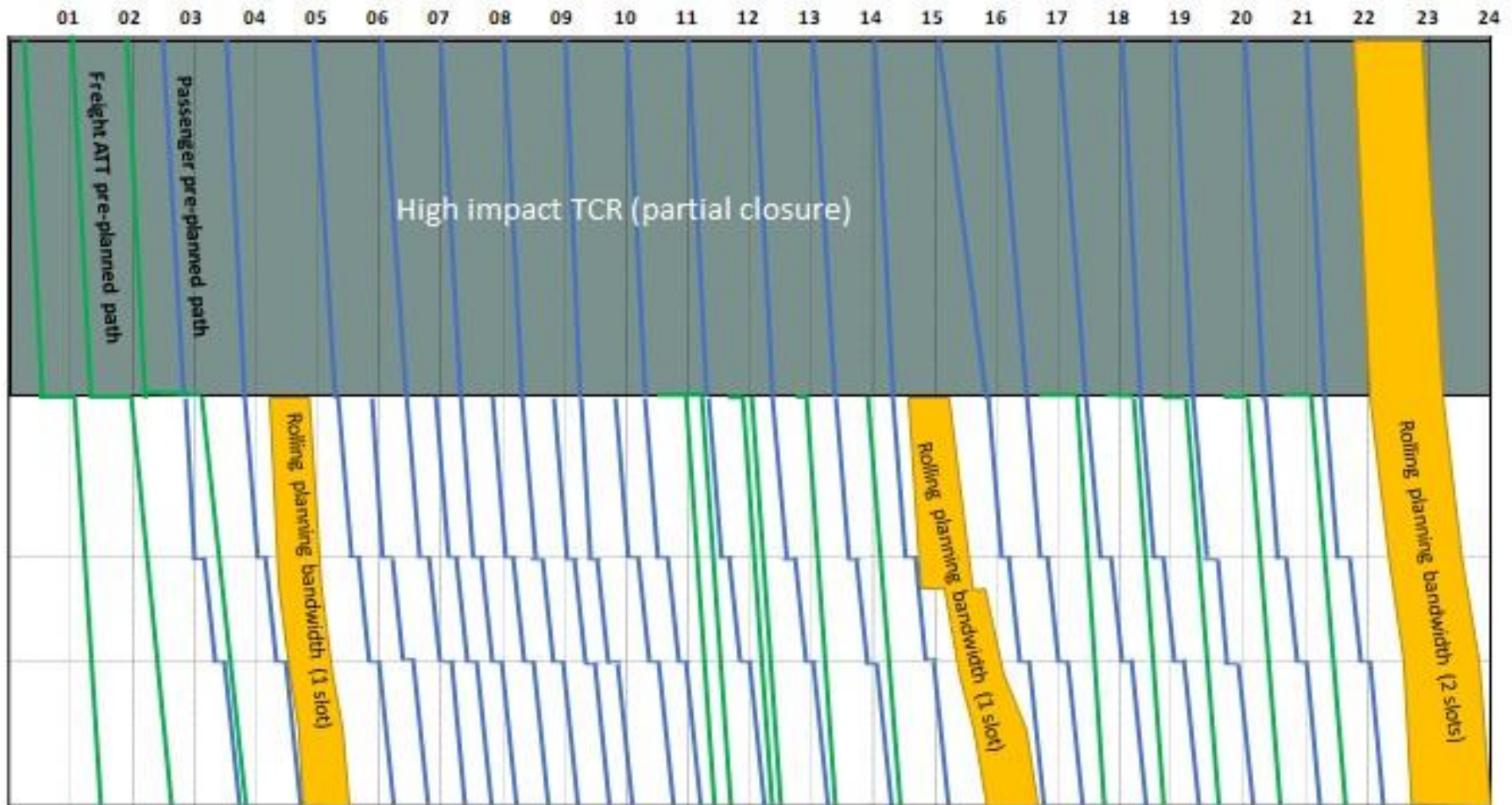
### Use case No 3: High impact TCR (with the dedicated model for the weekend traffic)

Total number of paths: 128  
 Number of paths affected by the TCR: 56  
 Impact on the 44% of the paths  
 Duration: 45 days

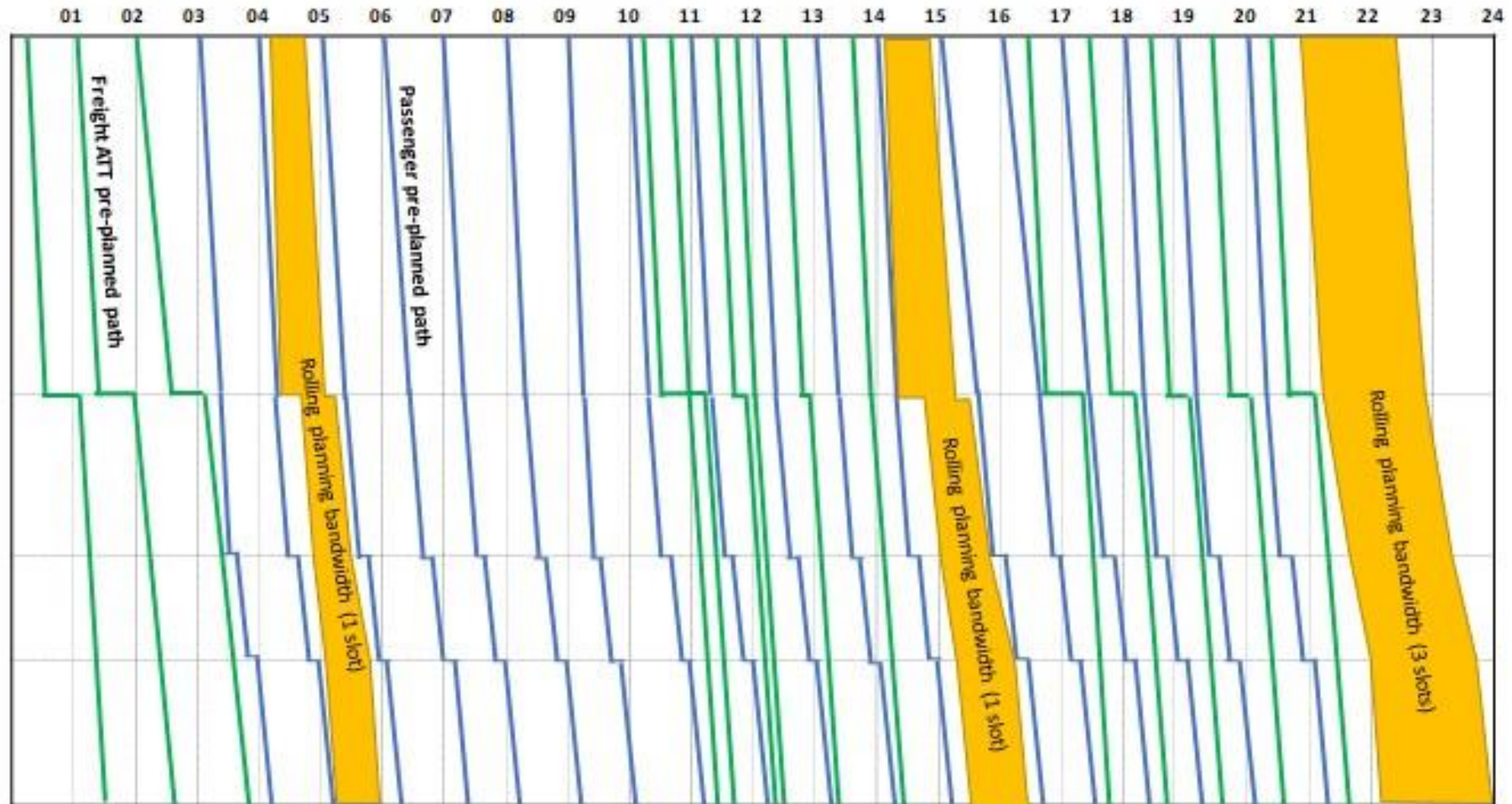


## Capacity Supply for a regular working day

**Use case No 4: High impact TCR** (more than 7 consecutive days & impact: more than 30% of the estimated traffic volume on a railway line per day)



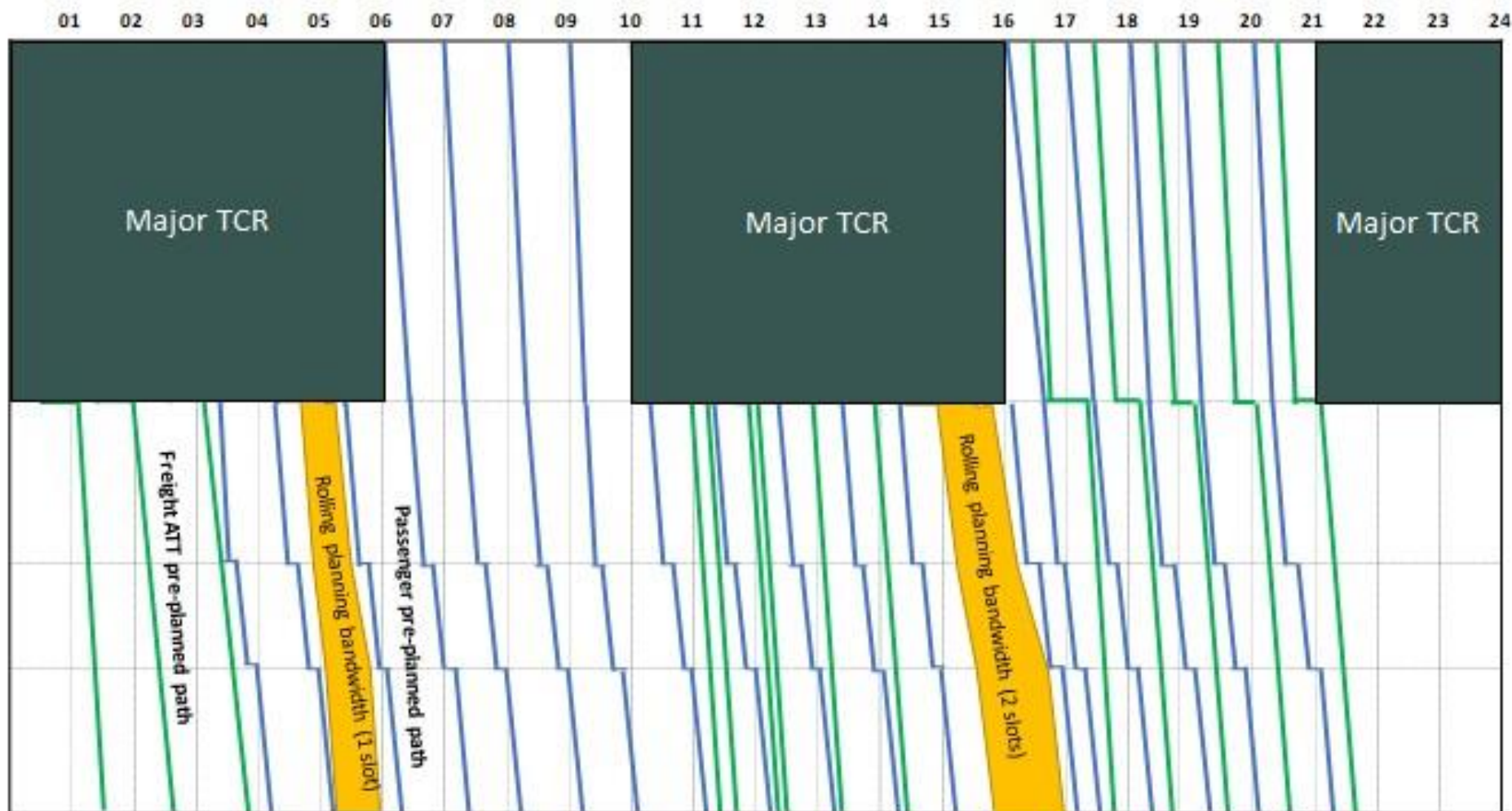
### Capacity Supply for a weekend day





### Use case No 5: Major impact TCR

(more than 30 consecutive days- taking into the consideration of the repetitive pattern- & impact: more than 50% of the estimated traffic volume on a railway line per day)



## Use case No 6: TCR Impact Calculation in the early stage of Capacity Planning

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42								
	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su								
Less than minor	2h							2h							2h							2h							2h																	Less than minor				
Minor							6h																																								Minor			
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High (even with gap)	8h	8h	8h	8h	8h			8h	8h	8h	8h	8h										8h	8h	8h	8h	8h																					High (even with gap)			
High (even with gap)	8h	8h	8h	8h	8h			8h	8h	8h	8h	8h			8h	8h	8h	8h	8h			8h	8h	8h	8h	8h			8h	8h	8h	8h	8h														High (even with gap)			
Medium							12h																																									Medium		
Medium				24h	24h	24h	24h	24h	24h	24h	24h																																						Medium	
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High (even with different %)				24h	24h	24h	8h	8h	8h	8h	24h	24h	24h																																				High (even with different %)	
High (even with different %)				24h	24h	24h	6h	6h	6h	6h	24h	24h	24h																																					High (even with different %)
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Major	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	Major	
Major (even with different %)	8h	8h	8h	8h	8h	8h	8h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	24h	Major (even with different %)

When categorizing and some differences in the % of the TCR over a period or minor gaps are realized, you should follow these guidelines:

- If the gap period between two periods is fewer days than each of the periods with restrictions, it should be seen as one TCR with the total of consecutive days calculated based on the period with restriction. E.g. 5 days with restriction + 2 days gap + 5 days restriction = 10 consecutive days
- If there is a variation of the % of the restriction over a period of consecutive days, it should be interpreted as one TCR when all periods are at least Minor TCRs
- If there is a variation of the % of the restriction over a period of consecutive days and it is interpreted as one TCR, the categorization should be based on the worst restriction if it covers more than 2/3 of the period necessary for a category
  - o >19 days of >50 % + >9 days of 30-49 % = Major impact TCR
  - o >5 days of 30-49 % + >2 days of 10-29 % or >50 % = High impact TCR

Note: The described calculation method should be supported by an IT tool.

## Annex B: Significantly modified TCRs

### Introduction

The aim of this description is to show a proposal of a concept regarding the changes made during/after TCR assessing or changes made to TCRs in publication status.

### Concept of TCR change

#### General information

Only the TCRs with involved (affected) IMs will be considered. Other TCRs are considered as national TCRs and will not be taken into account.

The concept shall include TCRs in the following statuses:

- Coordination
- Publication

The same approach should be implemented to TCRs changed manually or using the Excel, XML file.

The inclusion of RUs and RFCs in email notification of the TCR changes is out of the scope. The consultation phase will be considered inside the separate project.

### Big changes

#### Definition

The “Big” changes consider the changes that have a big impact on the involved IMs and involved IMs must be informed about them. The notification about these changes must be provided on a regular basis, means daily.

E-mail notification with summary report, that contains all the TCRs in which big changes were done, must be send to all involved parties (affected IMs).

After receiving such an email, IMs will login in the tool, open the TCR listed in the report they received, and check the history with the list of provided changes. In the “History” tab, all the changes by date are provided with detailed list of fields that were changed. The old and a new value of the changed field must be presented.

The following fields’ modification will be considered as “Big” changes:

- Location from, Location to – in the case of shortening or extending the route of the TCR
- Direction
- Affected border – adding a new or removing the existing border
- Affected IM – adding the IM in the coordination process or removing IM from the coordination process
- Deviation border
- Temporal expansion of TCR – all fields are important and in case of any change of any of these fields, involved IMs must be notified

**Type of TCR** – changing the type of TCR from continuous to periodical or vice versa. Making this change the affected days could be changed as well and therefore this information must be provided.

**Validity period** – changing the “Date/Time from” or “Date/Time to” values

**Working days** – changes of the affected days

**Weekly interval** – changes related to the TCR occurrence

- Impact on traffic – all the fields are important
- Classification – any change must be notified
- Traffic measures – any change must be notified

## **Small changes**

### **Definition**

The small changes consider the list of fields with a small impact on the TCRs that are in coordination and publication status. These changes don't have any impact on the on-going coordination neither on the TCRs already in the publication status and therefore the information about such a change will not be sent to the involved IMs.

The following fields' modification will be considered as small changes:

- IM project ID – add, remove or change the field value
- Reason for restriction
- Description
- Section
- Deviation location
- Involved RFCs – depends on the RFC role, information about this change will be sent to RFCs
- In annual timetable
- Automatic promotion – changing the “Set status automatically” to automatic or manual promotion